

**ONE DOLLAR PER YEAR.**

Club Rates.—Two copies, \$1.80; 3 copies, \$2.50; 4 copies, \$3.20; 5 copies, \$3.75. Mailed to any addresses.

THOMAS G. NEWMAN, } EDITORS.
GEORGE W. YORK, }

Vol. XXX. Sept. 29, 1892. No. 14.

EDITORIAL BUZZINGS.

Now Doth the busy little moth
Improve each shining minute,
By hunting up your nicest comb
And laying millions in it.

—E. L. PRATT, in Gleanings.

The Postponing of the World's Fair until 1894 has not been suggested, so far as we have heard. Bro. Jones, in the *Canadian* for Sept. 15th, says:

We wonder if there is any truth in the report that the World's Fair is to be postponed another year owing to the cholera epidemic.

Should it be postponed, we will at once notify our readers on this page of the BEE JOURNAL. Being right here "on the ground," as it were, we would likely hear of it as soon as any one.

Be Sure to read offer on page 445.

More Honey for Analysis is wanted by Prof. Cook, and he desires it at once. We have received the following from him, and he wishes us to aid him by urging bee-keepers to forward samples of the honey. Read what the Professor says:

DEAR MR. YORK:—In our investigations of honey we need samples of honey from honey-dew—dark, light, good, bad, all kinds; from oak and from bark and plant lice. I don't care if it was gathered several years ago, only if it is known surely to be such honey. I would like 3 or 4 pounds sent by express at my expense. I wish all would help me in this good cause. If needs be, I will pay for the honey. Yours truly,

A. J. COOK.

Now, if the reader has any honey that corresponds to the above description, please send 3 or 4 pounds to Prof. Cook, at Agricultural College, Mich. Every bee-keeper will be glad to help in this matter, we are sure. The Professor very much desires "to go the bottom" of this thing, so that hereafter chemists will be able to tell the difference between pure honey and the adulterated. Every producer of honey should be interested in this, and help all they possibly can.

Did you read Prof. Cook's article on "Chemical Analysis and Honey Adulteration," on page 401, of last week's BEE JOURNAL."

Every Boy and Girl will be interested in reading page 445 of this issue of the BEE JOURNAL. And we shouldn't wonder if the older folks, also, would be much pleased. We offer the BEE JOURNAL from now to Jan. 1, 1894, for \$1.00, to a new subscriber, and give the World's Fair Combined Games and Puzzles" as premium for getting such new subscriber. Or, we club it with the BEE JOURNAL for one year, for \$1.20.

The Illinois State Convention meets at the Commercial Hotel in Chicago, on Oct. 18th and 19th. Will you be there?

Bro. Hutchinson, of the *Review*, is now the proud father of an interesting "quartette" of the "sweetest" and "nicest" girls in all Michigan. We wish to congratulate our brother editor upon the recent arrival of the fourth little "queen," of whose advent he thus writes with such dainty eloquence in his September *Bee-Keepers' Review*:

Another "tiny feather from the wings of love" has been "dropped into the sacred lap of motherhood" at the home of the *Review*. It is one of the sweetest, nicest little girls that we ever had. Ivy said:—

"Papa, are you going to put her in the *Review*?"

"Yes, you write a notice, and I'll put it in."

"Oh, I couldn't do that."

"Well, let's see how you would start out if your *were* going to write one?"

"I would say, 'The editor of the *Review* has another bright, lively little daughter, although she has not made very much noise yet.'"

That was as far as I could induce her to go, but it expresses the situation as well, perhaps, as would a whole page, with the exception that the baby has since redeemed herself in the way of noise-making.

The Minnesota State Fair

was held at Hamline, Minn., on Sept. 5th to 10th, and the St. Paul *Pioneer Press* of Sept. 9th contained the following notice of the meeting of the State Bee-Keepers' Association, and also the honey exhibit at the Fair:

The Bee-Keepers' Association met yesterday morning in the Institute Hall to discuss plans for the World's Fair exhibit. The State Commission has set aside \$500 for this industry, but the members of the association are hopeful of securing a much larger amount. Mr. A. K. Cooper, of Winona, Secretary of the association, has charge of the collection of the exhibit, and he proposes to secure a little honey from every county in the State where any attention is paid to the keeping of bees. In some instances he may be compelled to buy the honey, but he expects to have this donated in most cases. Both extracted and comb honey will be collected. Min-

nesota is by some considered too far north for the honey-bee, but the State will make an effort to secure the first premiums at the World's Fair.

The past season has been a poor one for bee-keepers, but the exhibit in the main hall is a creditable one. J. P. West, of the State examiner's office, and President of the Bee-Keepers' Association, is superintendent of this display, and to his personal efforts is largely due the present success. J. M. Doudna, from the northern county of Douglass, has an attractive exhibit in beeswax, and some very fine honey; he has taken four first premiums and second prize in sweepstakes. Other counties well represented are Hennepin, Houston, Kandiyohi and Wabasha.

The Bee-Keepers' Association will hold its annual meeting in Minneapolis on Thursday, Friday and Saturday, immediately following the annual meeting of the State Horticultural Society, which will be held in the same place on the third Tuesday in January, 1893.

Construction of Bee-Cellars

is to be the "special topic" of the October *B.-K. R.* (If anybody but an old bee-reader could guess what those three initial letters stand for, we should be very much surprised.) In the department "Among Our Exchanges" in this issue, is an item which is taken from the *B.-K. R.* It requires a mighty good guesser now-a-days, to understand some of the modern ways of conveying knowledge. But we will try to keep up with the crowd, even though we "miss it" occasionally.

Drones and Electricity.—Mr.

F. Greiner, in *Gleanings*, in his "Cobs and Kernels," says this about the ability of drones to withstand a current of electricity:

Experiments made years ago in Germany have shown that drones cannot withstand as strong a current of electricity as workers. Would it not be simpler and cheaper, by means of an electrical battery constructed in such a manner that the strength of the current could be changed *ad libitum*, to kill all drones of a colony instantly, than to use drone-traps for the purpose?

In Sunny Southland—the new department conducted by Mrs. Atchley, on page 428 of this number of the BEE JOURNAL—seems to please a great many. Our thanks are tendered to *Gleanings*, the *Review*, and the *Canadian Bee Journal*, for the very kind and fraternal notices they have given about our new department. Read what they say about it, in the following paragraphs:

Mrs. Jennie Atchley is conducting a Southern Department in the AMERICAN BEE JOURNAL. She has had experience in the right direction, and knows how to tell it in an interesting manner.—*Review*.

We are pleased to note that Mrs. Jennie Atchley, so favorably known among bee-keepers, has taken charge of a department in the AMERICAN BEE JOURNAL, "In Sunny Southland." There is no doubt but its many readers will profit by her writings. Friend York is leaving no stone unturned to give the readers of the AMERICAN BEE JOURNAL good value for their dollar.—*Canadian Bee Journal*.

The AMERICAN BEE JOURNAL has just incorporated in its columns a new department, called "In Sunny Southland." It is to be conducted by Mrs. Jennie Atchley, of Floyd, Tex., a well-known writer and queen-breeder. The first installment, beginning with the Sept. 1st number, is good, and no doubt will maintain its initial standard of excellence. It is a good scheme, Bro. York, especially for the far-South readers.—*Gleanings*.

Giving Due Credit to our exchange periodicals for anything that we copy from their columns, we are very particular about, and we then expect that others will be equally careful when copying anything from the BEE JOURNAL. But it seems we were led into giving a wrong credit on page 343, where we say that the clipping about a "House Apiary Like a Passenger-Car" was taken from the *Canadian Bee Journal*, when it should have been credited to the *Bee-Keepers' Review*.

We took the item referred to, from the *Michigan Farmer*, which said that in the *Canadian Bee Journal* Mr. Harker said so and so, and of course we pre-

sumed that the *Farmer* knew what it was talking about; but we find that it also was led into the same error as ourselves, for the *Canadian Bee Journal* copied the whole article from the *Review* without giving any credit whatever—simply "cabbaged" the whole thing bodily!

Whenever we make an error in crediting anything copied, we are indeed glad to have our attention called to it, for we believe in giving "honor to whom honor is due"—even to giving full credit to Mr. Devil for his deviltry. We try to follow the "Golden Rule" in all things, but, like the rest of humanity, we sometimes err, for it is truly written, "To err is human."

We trust the editor of the *Review* will have mercy upon the one who lead the rest of us into evil, and, upon proper indications of repentance, to forgive as fully as he expects to be forgiven whenever he makes a mistake.

Honey Crop in Minnesota.—

Mr. B. Taylor, of Forestville, Minn., says this in the *Farm, Stock and Home*, about his honey crop, and that of Minnesota:

The honey crop at the Forestville apiary is the smallest ever secured. Ten pounds per colony is all we can expect, and we believe ours is above the average in this part of Minnesota. The entire Northwest is in pretty much the same condition. Comb, or good extracted honey, will bring a good price if well managed in marketing.

Mullein for Rheumatism.—

The St. Louis *Globe-Democrat* says this about using mullein for rheumatism:

It is not generally known that a decoction of the common mullein, which grows wild in every part of this country, is a most excellent specific for rheumatism. Among the German people so much confidence is felt in it that many of them use no other remedy for this disease, and it is seldom known to fail.

Straw Bee-Hives.—Mr. Frank McNiver, of New Jersey, in the *American Agriculturist*, gives the following description of the old "straw bee-hives," still used in some parts of Germany, we believe:

While the old straw cone-shaped bee-hive is referred to in hundreds of works on bee-keeping, and in encyclopedias, we do not now remember of ever reading any direction for, or description of, their manufacture. It may be that authors generally have considered the process too simple to need describing, for these hives are usually made of braided straw forming ropes an inch or two in diameter, and these are laid around a form of the required size, and then skewered together to give solidity, and keep the hive in shape when removed. A full size straw hive will hold about three pecks, but they are sometimes smaller. They have been generally discarded because they afford an excellent hiding place for the worms of the bee-moth, and are very difficult to keep clean, and in no way superior to hives made of pine boards, which are also cheaper and far more convenient for dividing swarms, removing surplus honey, etc.

The Honey Exhibit at the World's Fair next year should be the very best ever produced. Editor Jones, of the *C. B. J.*, has made the following excellent suggestions regarding exhibits of honey:

"For several years we exhibited 'The Lord's Prayer,' 'God Save the Queen,' and many other curiosities in connection with bee-keeping. We took the best double-calendared linen paper, printed on it in large bold type anything we wished, then dipped it in beeswax and put it through the comb foundation mill, then placed it in the hive; the bees would lengthen out the cells and fill them with honey or brood, as the case may be.

"We usually placed them where the bees would fill them with honey instead of brood, in order that the comb might be as bright as possible, then by holding this comb up to the light, you could read at the base of the cells the inscription.

"We would suggest that some of our bee-keeping friends take either this linen paper, or what is called 'tracing linen' (which is perhaps a little more expensive, but will stand more rough usage, and answer the purpose better), and on it have a good picture of Rev. L. L. Langstroth, with a short sketch of his life; then dip it in bright, clear beeswax, pass it through the mill, making a slight impression on it, hang it in the hive, and have the cells drawn out full length; take any honey out of it that may be in the cells, and have the comb on exhibition at the World's Fair.

"Why not have a fine large picture of George Washington, also Christopher Columbus? Sections of comb honey might be filled in a similar way, so that when the honey was eaten off down to the base of the cells, the pictures of gentlemen would be in the center of the section.

"Perhaps some of our ingenious friends will be able to photograph on nicely capped comb honey the picture of the purchaser or producer, or something that would make it attractive, and bring our industry more prominently before the public in this way."

The Wax-Palm of Peru exudes a wax from its leaves which closely resembles beeswax, and is used in making candles; while the wax-tree or *Vismia*, of Ceylon and Cambodia, produces a juice resembling gamboge, which is used as a medicine.

There's Not a Young Person but what can secure at least one new subscriber to the *BEE JOURNAL*, and get the splendid Premium offered on page 445. Try it.

When You Have any honey to sell, get some Honey Almanacs and scatter in your locality. They will sell it all in a very short time.

Among the Hummings in "The Apiary" department of the *American Farmer* for Sept. 15th, we find the following, which are interesting:

One or the first inducements for keeping bees is that honey is the most healthful sweet which can be produced. The farmer who does not keep bees loses more than he thinks.

Competition in the bee-business need not be feared, as pure honey is always salable at a remunerative price, and even the pleasure of having it for the table will pay for the trouble and time needed.

White clover stands first as a honey-plant, and linden second. The blossoms of the latter are peculiar. They are yellow in color, and arranged so that the nectar is easily gotten by the bees, and they can load up quickly and heavily.

The best method of feeding bees in winter is to give them a frame of honey. All colonies do not consume the same amount of stores, so that enough combs may sometimes be spared from those which have plenty to supply the needy.

It is said that there is less honey on the market now than at any other time since 1877. The scarcity is throughout the Eastern, Western, and Southern States, and is caused mainly by rains, drouth and cold. Nor are the prospects for a late yield promising. If this is true, it follows that good honey will command the best of prices.

A Protection for Shipping-Cases full of honey while in transit to market seems to be quite a necessity now-a-days. It is surprising that bee-keepers should be compelled to padlock their honey when shipping, and yet if we may judge from the experience of some of our honey-producers, they will have to do just that very thing.

Nice honey is so very tempting, that to see it is to desire it—even to the extent of stealing it, by some railroad employes. Of course, railroad companies should be held responsible for the safe arrival of the whole of a shipment to its destination—like anything else that is intrusted to their care.

Mr. C. H. Dibbern has had an experi-

ence on this subject which is interesting as well as tantalizing. He tells, in the *Western Plowman*, how to protect the shipping-cases, and to trap those who attempt to pilfer from the sweet contents. Here is what he says:

"In view of the trouble we have had with thieves opening and stealing from our section-cases while in transit, we have invented a "protection" that will either stop it, or make it easier to detect the thief.

"This device consists in passing a broom wire around the case after it is packed and nailed up, and fastening the ends by winding once around a wire nail, with a leaden head. The wire should be drawn taut, and cut off quite close to the nail. The nail should be driven in well, so the head will be flush with top of cover. A few blind staples should be driven over the wire at corners to hold it in place.

"Now, the wire is only just long enough to go around the case, and catch around the nail. Should the case be opened on any side the wire will let go, and it is almost impossible to fasten it again. If it is attempted to draw the nail, the lead will be marred, showing that it has been tampered with, which will make it easy for the officials to locate the thieves.

"The leaden-headed nail is made by taking B B shot and flattening it with a hammer on a hard board, and driving the nail through it. A barbed nail is best, as it cannot be drawn out so easily. So far as we know, there is no patent on this device, and we now freely give all our rights in it to the bee-keepers of the world."

A Much-Swarmed Colony of bees is heard of. It is said that Mr. L. B. Phillips, of Walnut Grove, Ala., has a bee-hive whose colony has, within the past four years, cast 115 swarms? Who can beat that record?

Have You Read page 445 yet?

IN SUNNY SOUTHLAND.

CONDUCTED BY

Mrs. Jennie Atchley,

FLOYD, HUNT CO., TEX.

A Queen-Rearing Dialogue.

(Continued from page 397.)

"Why not keep your breeder in a small nucleus, and be done with it?"

I tried that, and the bees did not seem to take hold and draw out the foundation fast enough to suit me, and I just keep my breeders in full colonies, and then everything works like a charm. Where we *must* have lots of queens, we cannot depend upon any slow, uncertain process. But, as A. I. Root says about his force gardening, we have to force things, and we must have *full* colonies to do it, that's all.

"How do you know when these cells will hatch that you are grafting there?"

Why, you see, they were eggs three days and larvæ one day, making four days, and as the queen hatches in 16 days, you see they will hatch in 12 days more. So, to be sure of things, I work them to hatch 11 days hence, and on the tenth day I remove them to nuclei prepared to receive them. Am I making all this plain enough for you?

"Yes, yes, I understand it all now. But let me ask what you are going to do with all these cells in this thing?"

You see now my cells are nearly all reared here at home, and these are placed in this little rack with their points all down. Well, the boys have fixed them that way to carry to an out yard, several miles away, and you see these cells hang in this rack just like they did in the hive, and by being careful we can carry them without injury 4 or 5 miles, and put them into nuclei prepared for them.

"How do you insert them?"

Oh, I just go along the rows about as fast as I can walk, and by the records on top of the hives I know when I come to one that needs a cell; I just open it, and place the cell down on the comb near the brood, and gently bring the next comb up just so that it will touch the cell enough to hold it. I do it so quickly that neither a smoker nor veil is needed. I do not stay long enough at a hive to sit down at all.

Well, Charles, I am now ready to go over to the Robinson yard, do you want to go?

"Oh, yes, certainly. I'm here to-day to learn, and I am 'getting there,' too, and 'don't you forget it.'"

Well, here we are. Now, if you will hitch the pony I will get things ready.

Now, here you see the record on this hive—queen sent out to Geo. Smith, Aug. 26th?

"Yes."

Well, this is Aug. 29th, so you see the queen has been out three days, and I know that the colony needs a cell.

"Why do you say 'out to Geo. Smith?'"

You see by that I know exactly who gets the queens from each nucleus, and I can tell long before Mr. Smith can, what kind of a queen he has, whether she was pure, and all about her brood, etc.

"Oh, yes, I see. What have you got a big shade over that one hive for, and none over the rest?"

That is a powerful colony where I keep my drones. Don't you see them flying thick? I usually keep this drone-hive queenless, too, for it might swarm away out here on this prairie, and carry off all my fine drones.

"Why don't you keep the drones in nuclei, too, and then they would not swarm?"

Oh, drones do not seem to fly nearly so active and constant from nuclei as they do from a strong colony.

"Oh, yes; I now see you believe in 'powerful colonies,' as you call them."

That's what I do. I can do more with one good, strong colony than with a half-dozen weak ones.

[To be continued.]

My Experience in Bee-Keeping.

I commenced bee-keeping three years ago, and have grown very enthusiastic. A friend gave me 5 colonies in box-hives. He said the bees troubled his stock so much at the well, and did him no good, that he wanted to get rid of them. I told him all right, and much obliged.

The next morning was a very frosty morning in April, and sunrise found me on my way home. When I got the bees I knew there was work for me, for I had never studied the culture of bees. I immediately searched the advertising columns of the papers, and in the course of a few days I found an advertisement

that read, "Everything needed in an apiary." I at once sent a postal card asking for a catalogue of supplies.

As soon as the catalogue came, I chose and ordered a Simplicity hive for a pattern to make my hives by; but by the time my pattern came, and I had made my hives and transferred the bees, the season had advanced so far that I got only a few pounds of surplus that season; but, by the way, I thought of something else when I sent for the hive, and that was, I didn't know anything about bees. So I ordered "A B C of Bee-Culture," and also an Italian queen and a nucleus.

Now, when I had reached this point, I found I had not yet started, so at it I went, the biggest lesson I ever had.

I have since then studied, manipulated and experimented, have read the AMERICAN BEE JOURNAL for more than a year, and, to sum it all up, I think I have a pretty general idea of the business. Mr. Root will please accept my thanks for the easy way and great pains he has taken to make known the mysteries connected with the business, in his "A B C of Bee-Culture."

To make a long story short, I can say that in 1890 I had 5 colonies in box-hives; transferred and got them well started, and in good condition for winter. In 1891 I learned to handle and Italianize bees, and secured an average of 40 pounds of honey per colony, and a fair increase of bees.

The spring of 1892 found me with 14 colonies, and up to the present, after a very severe early season, I have secured a reasonable crop of honey, some colonies having gathered something over 80 pounds of surplus each.

I may perhaps tell in the future something I have learned; and, if you don't watch me, I may tell something I haven't learned.

W. H. WHITE.

Deport, Tex., Sept. 12, 1892.

Experiments in Queen-Rearing.

I have been experimenting for five years in queen-rearing, and with as many methods as you could guess in five minutes, and with good results. I first reared queens by the "slam-bang" method. What I call "slam-bang" is to remove a queen and let the bees have their own way in rearing or building cells.

My second method was to remove all brood from a colony, and give them eggs from my choice stock, and have cells

built on the comb at any place, cut them out, and insert them in other combs in nucleus hives. I found that was a smash-up and destruction to young bees, so I abandoned that method, and then went to work to see what could be done in the way of getting cells built on strips of combs; one row of cells cut from the combs containing eggs, and then getting a comb around under the bottom and fastening one end to the left corner, and bringing it to the right and fastening the other end with the cell-cups down. Before I fasten this strip on I kill every other egg, and then I place the comb in a hive that I had prepared the day previous.

The way in which I prepare my hive is to take queen and all brood except one comb, to another point in the yard, and set up a nucleus hive. I shake all the bees from seven combs, and only leave the bees on three combs to start the new colony. Now I have a hive booming with bees to build cells.

I now take the comb I left with the brood in, move to the new hive, and leave the comb with the cell strip under the bottom with eggs, for queen-cells are all the eggs that are in the hive. I then go to other hives and get comb that has no eggs nor brood in them, and put into hive No. 1, and close it. On the fourth day afterwards I open hive No. 1, and examine the comb containing cells, when I generally have an average of about 12 cells. I then leave them until they are 12 days old, and then I cut them out and place them in a nucleus hives to hatch and be mated.

This method gives the finest cells that I ever saw, and also fine, large queens, which are very prolific. I also find that they are superior to any queens reared in any other way.

I forgot to say that when I got a row of cells sealed, I removed them to a nucleus where I had previously removed the queen for this purpose, and I insert the second comb with another row of cells, and when they are nearly completed I carry them to another hive, insert a cell of the former rearing, and have a queen hatched in the hive, and have another, or others, building cells under the same management.

I find that queens are uniform in size and color, that the bees are better workers, on an average, as well as larger and gentler.

J. W. TAYLOR.

Ozan, Ark.

Friend T., your plan as given above, is similar to the Alley method, and is a good way.

QUERIES AND REPLIES.

Do the Bees Store Water ?

Query 838.—1. Do bees store water in their combs? 2. If they do so, at what time of the year is it done?—Nebr.

No.—MRS. L. HARRISON.

I think not.—H. D. CUTTING.

I think not.—G. M. DOOLITTLE.

Mine never have.—JAMES HEDDON.

Not in our opinion.—DADANT & SON.

1. I hardly believe they do.—C. C. MILLER.

I have never known them to do so.—J. P. H. BROWN.

1. I have never observed that they do.—EUGENE SECOR.

1. I think not in its entirety. 2. Early spring.—J. M. HAMBAUGH.

To a small extent, in early spring before they find any nectar.—R. L. TAYLOR.

Bees carry water, but I don't think they store much in the combs.—E. FRANCE.

I have never known them to do so, but have seen the claim made that they do. I do not believe they do, however.—J. E. POND.

I have never seen water in its purity in the cells, put there by bees. I think they only carry in water as they need it.—G. W. DEMAREE.

1. That they do use water, every bee-keeper ought to know. 2. At the time of year when they need it, if they can get it.—A. B. MASON.

I have never seen any pure water in the combs stored by bees, and do not believe they store, any, at any time of the year.—C. H. DIBBERN.

I think they never do. I have handled bees for 23 years, and I have never seen any evidence that they stored water in the combs.—M. MAHIN.

Bees carry a great deal of water into the hives when actively breeding in the spring. I think they use it as they have need, for the young.—G. L. TINKER.

1. I think not. They often place water over the capped brood in hot

weather. 2. Only in hot weather. They place water about their brood and combs, but I don't remember seeing water stored in combs, at all.—MRS. JENNIE ATCHLEY.

1. No; I do not think so. I never saw any signs of it. I think it is taken for immediate use. 2. They need it when breeding rapidly. It keeps them in good condition.—A. J. COOK.

I have noticed what I thought to be instances of this on one or two occasions. This was in August. I do not think it is common for them to store water in any quantity.—JAMES A. GREEN.

Much water is used by the bees, mixed with honey and pollen in rearing their young; but from their fanatic desire to find water after one or two days' confinement, we may infer that they do not have much of it in store.—MRS. J. N. HEATER.

The bees use water when breeding, and carry it to the hives for immediate use, but rarely if ever "store it."—EDITORS.

Mr. S. Stutterd, a prominent European microscopist and entomologist as well as linguist, naturalist and geologist, died recently. The *British Bee Journal* of Aug. 25th, says this about him:

It is with regret that we have to announce the death of Mr. Samuel Stutterd, which took place, after a very short illness, at Grimsby. Mr. Stutterd was a gentleman of culture and ability, and had long been connected with most of the literary and scientific institutions of the town. He took an active interest in the Mechanics' Institute, and especially in the library. He was a good "all-round man." He had a good knowledge of the best modern literature, and was an able linguist, as well as a naturalist and geologist. At one time he was secretary of the Science and Art Classes and of the Sketching Club. He was also a microscopist and entomologist. His name will be better known to bee-keepers from the fact of his having, in conjunction with Mr. H. Dieck, translated from the German that standard work by Dr. Dzierzon, entitled "Rational Bee-Keeping," which was edited in 1882 by Mr. C. N. Abbott. Mr. Stutterd was greatly esteemed by all who were acquainted with him.

CORRESPONDENCE

ON IMPORTANT SUBJECTS.

Drone-Bees and their Ways.

REV. W. P. FAYLOR.

The drone-bee is not so much looked upon now as formerly as an idler in the hive. From pulpit and pew, from wayside and home, he has been the remark of indolence. Recently a Presiding Elder in the West issued a call through a leading periodical, for some preachers to fill vacancies on his District, and concluded his request by saying, "No drone need apply."

To my mind, I believe that the drone-bee fills its sphere in life, and is just as industrious in his mission here, as any other creature. The intelligent apiarist has noticed again and again that a hive of bees with hundreds of drones has rolled the honey into the sections, while a sister colony, equal in numbers of workers, without drones, has yielded almost nothing. I now usually aim to keep some drone-comb in every hive. If I only wish drones from desirable colonies, then I keep drone-brood shaved down, and pick by hand a few dozen drones for each colony. During the honey season, or flow of nectar, drones may be shaken into any colony, and are almost always received.

The life of the drone is very short—much shorter than that of the workers. I believe that many of the drones are caught by birds and enemies of bees. Drones are more clumsy and less rapid in their flight than worker-bees, which renders them a better prey for their enemies in the air. It is fortunate for the neuters that they can fly so fast.

The drones aid in keeping up animal heat in the hive. They assist in stimulating activity. I have also some faith that they aid in carrying honey from one cell to another, and ripening the same. If we place a feeder with syrup in front of the hive, we will usually find drones in this feeder during all hours of the day, aiding as best they can to remove the contents to the cells of their combs.

HOW TO KEEP DRONES DURING DROUTH.

A correspondent from the East wishes me to give a method "for keeping drones when the honey season is past." This I willingly do.

Always aim to have some choice

drones creeping out of their cells at the close of the honey harvest. Then make one or more colonies queenless, and give these emerging drones to the queenless colony, or colonies. Brood and eggs may be added once in a week or two, but look over every comb now and then to be sure that no queen gets into this hive, or hives, made queenless. Keep all queen-cells cut out before their contents emerge in the shape of virgins. Feed this colony, or colonies, well, and always feed about noon the colonies you wish drones to fly from about the time you expect virgins to come out on the wing. When there is no nectar in the fields, you will thus create activity among the workers and drones of such colonies.

At any time should you run short of drones, you can rear drones by giving a good colony nothing but drone-comb, so that the queen will be compelled to lay eggs in drone-cells. All eggs laid in drone-cells produce only drone-bees. If we remove worker-eggs from worker-cells, and place them in drone-cells, we shall get drones as a result. Whether the bees by blind instinct always extract the sperm fluid or not from worker-eggs when in drone-cells, I do not know; but one of two things must be true—either all eggs from a fertile queen must be alike, or the worker bees possess the ability to change the eggs. Our good friend, Prof. Cook, says:

"When the workers are able to abstract the sperm-cells, which are so small that we can only see them by using a high power microscope" (though he acknowledges, and so do I, that sperm-cells cannot be discovered in bee-eggs with any kind of microscope), "then we may expect to see wheat turn to chess."

That wheat will turn to chess is evident—a fact I have seen demonstrated—a change I can produce myself; but this egg process is yet wrapped in mystery. See Cook's Manual, pages 81 and 74.

DRONES MEETING A VIRGIN QUEEN.

It was my pleasure yesterday (Aug. 1st) to witness a sight I have longed to see for years—thank Providence for the privilege.

About 1 o'clock p.m. a virgin queen, urged strongly by the bees to go out of the hive of a nucleus colony, tried several times to fly, but failed. Then I caught her and tossed her up into the air, and discovered that she could not fly.

Next I picked her up, and seeing her run about on my left hand, carried her

to within about 10 feet of a queenless colony that I had just fed some honey a few minutes before, and, to my astonishment, the drones came rushing about this queen on my hand like mad hornets. One drone threw her over on her side, but she was on her feet in an instant. Several drones gave her each a tap, and then left.

In a short time the buzzing stopped, and the drones all went back to their hive. But not one of these drones left any of the sex-organs adhering to the queen. I do not know that this queen is preganated, but I shall watch her closely for the next two days to see when she begins laying, and whether she attempts to leave the hive again.

I have believed during the past that the reason the bees from one queen vary so much in color, is because the queen on her wedding-tour meets and copulates with different drones of various stripes. Then my observation has been that only about one-fourth of the queens that become fertilized carry enough of the vital fluid with them, received from the drones, to be visible to the naked eye at all.

I have watched some virgin queens very closely, have seen them come out of the hive as many as a half-dozen times, then I have opened the hive and scrutinized the queen very closely, but could see no trace of fertilization until the next two days, then I would see the abdomen begin to enlarge, and know in this way that she had met some drones; for she would begin to lay at the appointed time.

One fact is now settled, namely, that the queen attracts the drones, and not the drones the queen. The many are attracted toward the one, and not the one toward the many.

Another truth is, that the queen must be "on the spree," or have the desired sexual-impulse to attract the drones.

A few weeks ago, when there were some 30 virgin queens on the wing one day, I observed that the drones were so excited as to fly in and out of their hives like robber bees.

Yes, reader, the drone fills his mission well in life, and if we can do as well as he, we shall feel well at the close of life.

La Porte, Iowa.

The Globe Bee-Veil, which we offer on the third page of this number of the **BEE JOURNAL**, is just the thing. You can get it for sending us only three new subscribers, at \$1.00 each.

The Grading of Comb Honey.

W. Z. HUTCHINSON.

Although most farm products are graded, there have never been any general rules for the grading of honey. Naturally dark honey is seldom mixed with white honey, because, if this were done the whole lot would bring only the price at which the dark would sell, and for the same reason unfinished sections are seldom crated with the finished combs.

In reporting the market prices, dealers usually make use of the terms; "fancy," "choice," "No. 1," and "No. 2;" but there is much confusion in regard to the exact meaning of these terms. A producer may think that his honey is choice, or No. 1, but when it reaches the dealer, the latter finds it far from what the producer called it, and from this condition arise disputes and unpleasantness.

Last fall, when the Northwestern Bee-Keepers' Society met at Chicago, there was an attempt to formulate a set of rules that might be used in grading honey, and, at the meeting of the North American Bee-Keepers' Society at Albany, N. Y., an improvement upon the Chicago rules was suggested. Since then the matter has been thoroughly discussed by bee-keepers, yet there are so many points to be considered that an agreement is difficult. Possibly none will be arrived at until some set of rules has been given a trial, that actual practice may point out more clearly what is needed. After attending both of the conventions mentioned, and reading all of the discussions on the subject, I am inclined to give preference to a formula reading about as follows:

"Fancy."—All sections to be well-filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb to be unsoiled by travel-stain or otherwise, all the cells sealed, and the honey of uniform color.

"No. 1."—All sections well-filled, but with combs uneven and crooked, detached at the bottom, or with but few cells unsealed; both wood and combs unsoiled by travel-stain or otherwise, and the honey of uniform color.

"No. 2."—Sections with comb, or both, travel-stained, or otherwise much soiled, and such sections as are less than three-fourths filled with honey, whether sealed or unsealed; and the combs containing two or more colors.

"No. 3."—All crates filled with honey not described in any of the foregoing grades.

The color of honey to be known as "light," "amber" and "dark." The crates to be unsoiled, but if otherwise, the honey in such crates to be classed in the next grade below the one indicated in the instructions. In describing honey we would then have "fancy white," "fancy amber," "fancy dark;" and "No. 1 white," "No. 1 amber," "No. 1 dark;" and "No. 2 white," "No. 2 amber," and "No. 2 dark."

Upon this point of color there has been a great deal of contention, some asserting that only white honey could be called "Fancy" or "No. 1." There are many people, however, that regard buckwheat honey as the best honey; to them there would be fancy buckwheat or dark honey. Tastes differ in this respect, and the plan of calling only white honey first-class will not be feasible.

When it is possible, to give the source from which honey is gathered, might answer instead of giving the color, if all people were as well informed as bee-keepers in regard to this matter; but, as it is, it is probably best to use the words "white," "amber" and "dark."

Uniform grades and terms will improve the price.—*American Agriculturist*.

Scientific Ignorance About Bees.

REV. E. T. ABBOTT.

MY DEAR MR. YORK:—I hand you herewith a copy of an article which I mailed to the *Atlantic Monthly*. You can make such use of it as you deem best.

EMERSON T. ABBOTT.

St. Joseph, Mo.

[The following is the article referred to in the above:]

Permit me to offer my protest against some of the statements made in Prof. Evans' article in the February number of the *Atlantic*. The Professor seems to have a genius for making wild and extravagant assertions in the name of science (?), for this entire article is filled to overflow with statements that lead one of a skeptical turn of mind to doubt, to say the least.

I will leave it to others to criticise the improbable stories he recites about ravens, storks, etc., and confine my criticisms to a field in which I have some

right to speak with authority. If his statements about birds may be spoken of as improbable—and I think they may—it will be putting it mildly to say that the statements he makes about bees are, most of them, absurd, and entirely unwarranted in the light of facts as known to every intelligent bee-keeper.

SEVERAL LARVÆ IN ONE CELL.

Take the following: "In order to provide for emergencies, several larvæ are reared in a single cell, which the old queen is never permitted to approach." It is a matter of great interest to every bee-keeper, who has read this statement, to know where the Professor got his information. Surely, if it is a fact, he is entitled to the honor of having made an original and unique discovery. I am fairly well acquainted with the reliable literature on the subject of bee-culture, and I am quite sure that this is the first time I have ever chanced to meet a statement like this.

I also profess to know something about the economy of a bee-hive, and I am willing to risk my reputation for truth and veracity on the statement that no man, living or dead, ever knew more than one larva at a time to be reared in a cell. I should look upon this statement of the Professor's as an attempt to be funny, if I did not know that he had the reputation of being a careful writer. If this reputation was acquired by making such wild and improbable assertions as he does about bees, I confess it does not speak well for the intelligence of his readers.

He tells us that the workers are "incapable of laying eggs;" but they do lay eggs all the same, and it is a question whether there is a single worker-bee living that cannot lay eggs under certain conditions. It is true, they do not make a business of laying, to use the parlance of the street, but this is not proof that they *can* not. On the other hand, we have abundant proof that they can, and frequently do, lay eggs.

HONEY-BEES IMPROVING THEIR METHODS.

He informs us that the honey-bees have "improved their methods of work in the memory of man." This sounds very plausible, and I have no disposition to call in question the theory of evolution with which this statement is supposed to be in harmony; but the statement itself, in my opinion, is not true.

History has not recorded a single radical change in the habits of bees. So far as we know, they build their combs

in the same way, and with the same mathematical exactness that they did ten thousand years ago. They gather pollen, honey and propolis, and perform all the economy of the hive in the nineteenth century exactly as they did in the morning of creation, when they first evolved into bees, or were created full-fledged and perfect—I do not care which theory you hold; the fact remains that they are to-day where they began as bees, and history records no change in the "memory of man," or any other time. Darwin knew this, and therefore he said, "The hive-bee is the least variable of all domestic animals."

The Professor also rehashes an old story, which is known among bee-keepers as the "Wiley lie." I refer to his statement about "manufactured comb." This has gone the rounds of the papers of the country so long, and has been denied and proven to be false so many times, that it greatly surprises one that a man of any reputation would repeat it, or a well-known and popular journal like the *Atlantic Monthly* publish it. In the name of thousands of honest, earnest, and industrious bee-keepers, I want to protest against this statement being repeated again, and I trust you may think proper to give the denial as wide a circulation as you have given the false statement.

Permit me to call your attention to the inclosed article which appeared in the *Popular Science Monthly* for May.

NONSENSICAL "SCIENTIFIC" EFFUSIONS.

The Professor's effusions about "bee communities relapsing into barbarism," "barricading the entrance of their hives;" also "making of deep, narrow gateways," etc., sound like the poetical dreamings of a half-educated savage, and make one think of the science, so-called, and literature of the Dark Ages. There is a good deal of imagination and very little truth in them, therefore, they do not deserve a place in the literature of this age of facts and figures.

Had he ceased to draw upon his imagination here, he might have been excused on the plea that he was trying to write a poetical prose; but he gives the wings of his imagination full liberty, and takes still higher flights than any at which I have hinted. Witness the following:

THE MOTHER-HIVE AND HER COLONIES.

"It is undeniable that, in the life of the honey-bee, a sort of historical connection exists between the mother-hive

and her colonies. This sense of kinship extends to the colonies of colonies, and thus gives rise to something like international relations between a large number of apian communities, which share the friendships and hatreds of the original stock, and transmit to their posterity."

Lenz, he tells us, relates his experience on this point. Some of his hives being blown down by the wind, he hastened to set them up. The bees saw him thus engaged, and, regarding him as the cause of the disaster, stung him. For years afterward they pursued him whenever he approached the hives. This unjust antipathy was inherited by all the swarms which issued from these hives, and formed colonies elsewhere.

It is wonderful how much use this learned savant has made of this little accumulation of what he evidently supposes to be facts. He probably sold it to the *Popular Science Monthly* for so much a line, and, no doubt, drew upon you for a like sum; and, for all I know, he may still be sending it out to noted journals for such pay as his reputation will command, on its mission of enlightening the earth. Yet, there is not even a shadow of truth in it.

In three days after a swarm has issued from the hive, should one of the bees belonging to it return to the parent colony and attempt to enter the hive with a view of helping herself to the honey, some of which she had gathered, she would be immediately informed that she had no rights there. Should she persist in her attempts to enter the hive, she would be severely chastised, if not killed outright.

Lenz, to whom the Professor refers, may be authority on some things, but I do not hesitate to say that he is not authority on the habits of bees. I submitted the question of the authority of Lenz and Wundt (whom Prof. Evans quotes as backing up his extraordinary statements), to one of the ablest living writers on the subject of practical bee-culture, and a man well posted and thoroughly acquainted with all the literature extant on the subject. He replied:

"I went to my library and opened Bastian, whose book contains a bibliography of the authors of bee-culture, with the title of their works since 1568, to find the names of Lenz and Wundt, but Bastian did not mention them, although his bibliography contains the names of more than 400 bee-writers. My researches," he says, "in the books

of Baron von Berlepsch and Dzierzon were equally fruitless, notwithstanding these writers quote a great number of authors in their books."

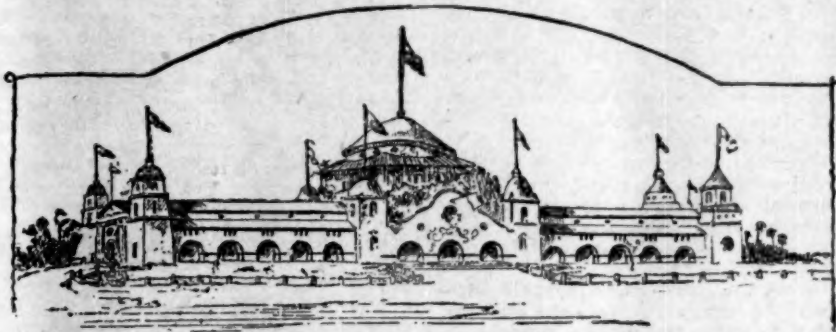
Sir John Lubbock says, "I doubt whether bees are in the least fond of one another. I have not been able to discover any evidence of affection among them. They appear to be thoroughly callous, and utterly indifferent to one another."

TRADITIONS (?) AMONG BEES.

Prof. E. tells us that the bees that suffered the supposed wrong never forgot it, and communicated their feelings to their descendants by way of tradition (1). If communicated at all it was by tradition, for the bees that did the

possibly affect the males and fertile females, which alone leave descendants. I am surprised that no one has hitherto advanced this demonstrative case of neuter insects, against the well-known doctrine of inherited habit as advanced by La Marck."

I know of no more fitting language to apply to these statements of Prof. Evans', in closing this long article, than that which the Professor himself has furnished us, in the early part of his article, in speaking of the positions of the late Prof. Von Prautl, "The weak point of these speculations is, they are too exclusively metaphysical, constituting a logical and systematic exposition of conception, or notions without that accurate and exhaustive observation of



California State Building at the World's Columbian Exposition, in 1893.

stinging were all dead in two months at most, if it was in early spring, and they did not live more than six months at best.

Then, again, they never had any posterity to which they could transmit this ill-feeling, for the queen that laid all the eggs, from which the future inhabitants of the hive were hatched, knew nothing of the stinging unless the worker-bees told her about it. Then in order to hand it down, even as a tradition, it would be necessary for her to tell the young bees and queens about it as they came into the world, and thus it would go down from generation to generation. This seems quite "fishy" to an ordinary mortal, but it may be good science in the country where Prof. Evans lives.

So far as the transmission of tendencies in the bee-hive is concerned, Darwin settled the matter a long time ago. He says, "Peculiar habits confined to the workers, or sterile females, however long they might be followed, could not

facts which acuteness of analysis and no vigorous process of pure thinking can supply. Prautl," he says, "is ignorant of the habits and aptitudes of animals."

So far as bees are concerned, Prof. Evans seems to be suffering from an attack of the same disease.

St. Joseph, Mo.

Bee-Questions by a Beginner.

E. S. MILES.

Last spring I got a swarm of bees in the woods, by taking a portion of the tree. The next day they swarmed out. We caught and hived them in a movable-frame hive. The next day after, they swarmed out of that, and we hived them again, and put a queen and drone trap on. They swarmed out a couple of times after that (leaving the queen—

they only had a few drones), and then went to work.

I did not pay much attention to them for several weeks, supposing them all right (they had a new hive with foundation) until I noticed they were flying hardly any. On looking them over I found a very light colony, with only about as much comb as they had a few days after being hived, little brood and eggs, and practically no honey.

On the bottom of the frames and covers of the hives I found two or three dozen whitish or lead-colored worms, from $\frac{3}{4}$ to $1\frac{1}{2}$ inches long, with dark-colored heads, fattish, and good crawlers, smooth, with no hair on their bodies.

Are these the young of the bee-moth? What can I do to get rid of them, and prevent them in other colonies? I have looked them over several times, dipped the bottoms of the frames in hot water, and put the bees into a new hive. I found, just the other day, 3 or 4 worms (always on the bottom of the frames). I scalded them again, and put the bees in another new hive. I have never seen any worms on or in the combs.

Since buckwheat and smart-weed are in bloom, these bees have built some more comb, and have stored quite a little honey. I also gave them a good frame of brood and partitioned them off with a division-board. They have a laying queen, and are getting a little stronger in workers all the time.

I also found at one time a gray-colored moth, or miller, about one inch long, under the cover of this hive, and one once under the cover of a box-hive I have.

Last spring was a hard one on bees in this locality, but the summer has been a good one, I think. Of course, I am only a beginner, and therefore not much of a judge.

Denison, Iowa, Sept. 2, 1892.

Mr. J. A. Green, of Dayton, Ills., to whom was referred the above questions for reply, has kindly given his opinion as follows:

It would be impossible to say why the bees should have swarmed out so persistently, without knowing the exact circumstances. Bees will often leave the hive in which they are placed because it is too small or too large, or because there is some bad odor about it, or for a dozen other reasons. One of the most common causes of swarming out, is a hive that has been left out in the hot

sun until it is more like an oven than an inviting home.

In some of your manipulations you probably killed the queen, or she was superseded soon after the swarm was hived. During the interval that it took to rear another queen, the colony, not having any accessions of young bees, dwindled rapidly in numbers so that before the progeny of the young queen began to hatch out, only a small proportion of the original colony was left.

Or, it may have been that the honey-flow ceased so soon after you hived them that they were unable to build more comb. Bees consume large quantities of honey in secreting wax to build combs, and if the daily supply is only sufficient for daily needs, or less, little or no comb will be built, nor will foundation be drawn out. The queen is thus restricted in egg-laying for want of cells in which to deposit her eggs, so that the strength of the colony is not kept up. As you say you found little honey in the hive, the latter explanation is perhaps the more probable.

The worms you found on the bottom of the hive were the larvæ of the wax-moth, the perfect insect being the miller you saw. The way to keep them out of your colonies is to get Italian queens and Italianize your bees. Strong colonies of common bees are seldom injured to any extent by moths, but even the smallest colonies of Italians are proof against them, as they are so much more energetic than the common German or black bees. Moth worms are to be found in the combs of nearly all common bees during the summer, but such things are a rarity in an Italian apiary. This, too, is one of the least important points in which the Italians are superior to the blacks.

J. A. GREEN.

Appropriations for Apiarian Statistics.

HON. J. M. HAMBAUGH.

It is with pleasure I have the honor of addressing you in accord with the kind request of your worthy Secretary upon the subject of "A State Appropriation for the Collection of Statistics and Dissemination of Information in Apiculture." Truly, this is a subject that commends itself to the consideration of every fair-minded man who has the weal of his fellow-man sincerely at heart.

It is universally conceded that apiculture is one of the legitimate industries of our land, and while it may not rank

as high in a financial point of view as some of our sister industries in point of finances invested and annually received and disbursed, yet, when the relationship of our industry is considered with that of horticulture, floriculture, and the many seeds and grasses of our country, to say nothing of the products furnished our markets in the way of honey and beeswax, we will find, when unbiased investigation is given, the subject of apiculture is one of the most important on the category of industries.

All subject-matter given in the direction of the dissemination of knowledge upon this important subject will be a boon to humanity and should be given the widest possible circulation.

I am not sure that any argument could be presented, that would insure the clemency and favorable consideration of our law-makers upon the simple grounds of the importance of the pursuit in the visible financial consideration of the industry considered within the scope of its own product.

It is by no means a new theory, that the sexual transmissions of plant-life is carried on largely by the visitations of insects during the time of their blooming, but that the education of the masses upon this important subject in the past has been sadly neglected is very apparent; and as we advance in wisdom and intelligence these once mooted questions will become standard facts, and the vocation of bee-keeping will be nurtured as one of the leading and most useful industries in our land.

In order to present this matter in its most impressive form to the members of the General Assembly, you must enlist one of its members in your service, who is thoroughly conversant with the routine of legislative work, and who will be painstaking in every particular. He must know there is no flaw in his Bill as presented, and when it is once consigned to the Committee on Appropriations, he must be able to show by outside pressure that the bee-keepers are in earnest.

There should be a committee appointed by your State society, composed of the representative bee-keepers of your State, to go before the Committee in behalf of the Bill. The bee-keepers composing the constituency of the various members of the Committee on Appropriations should also write letters to their members soliciting their vote in its favor.

Another very important matter will be to secure the services of the members of the State Horticultural Society, and have them make an appeal, in person if

possible, and if not, by letter, to the Committee, which you will find will bear great weight for favorable consideration in the minds of the various members composing that body.

It is an important point to secure as early action as possible on the part of the Committee, and should you succeed in having it returned back to the House or Senate (as the case may be) with the recommendation "that it do pass," you can consider half the battle won.

It should be remembered, however, that every Bill presented must go through the same routine in each branch of the Legislature; hence the necessity of early action on the part of the Committee, and having it placed upon the calendar.

All appropriation bills are granted the right of way over all other bills, hence there is but little danger but some disposition will be made, should it ever get out of the committee room.—*Read at the Missouri State Convention.*

Spring, Ills.

The Honey Crop a Fair Average.

F. R. MANNING.

The honey crop is a fair average this summer. There was an abundance of white clover, the roadsides and pastures being white with bloom, and the bees made good use of it. My bees have gathered, as near as I can figure it, 65 pounds per colony, of white clover honey, and what the fall average will be I cannot tell. The prospect is good in this section for a large yield of fall honey, as the corn-fields are covered with the big smart-weed.

My apiary is in the yard between the house and work-shop, and in passing from and to my shop, it makes me rejoice to hear the humming of the little workers as they go and come from the fields. I have just 100 colonies, and nearly all hybrids.

On July 27th, I put the strongest colony I had on a pair of scales in the evening, and balanced the scales; and on the evening of the 28th I balanced the scales again, and there was a gain of $14\frac{1}{4}$ pounds. How is that for one day's work from hybrids?

It makes a bee-keeper rejoice to get a good crop, as in this section there was no honey the last two summers, and the honey this summer, I think, is the nicest I ever saw. The sections are filled square and full.

Last year my bees gathered but very

little of the black honey, and I think the most of my colonies had some of that to winter on, and those that had it came out in the spring in as good condition as those that had honey that was gathered from Spanish-needle and smart-weed.

I usually winter my bees in the cellar, but last winter I left them on the summer stands, packed with chaff, and they came out in fair condition in the spring. Out of 75 I lost only 2, but through April 4 were robbed, so that left me 69. I increased to 100, and that is as many as I want to attend to and do the work right.

The prospect is good for the bees to gather a good quality of honey to winter on, and I hope that we will have good, strong colonies to start with next spring.

I think that the prospect is better for the bees to winter than it is for the bee-keepers in this section, as there are no potatoes, cabbage or vegetables to speak of, of any kind; and as that stuff is the back-bone for the Dutch and Irish, I often think how cruel it is to abuse the little honey-bee, as there is no other living thing on earth that will gather the honey and store it in the sections for the bee-keeper, for there are thousands and thousands of pounds of it in the fields, and it would stay there if it were not for the honey-bee.

Reynolds, Ills., Sept. 12, 1892.

Bee Journal Posters, printed in two colors, will be mailed free upon application. They may be used to advantage at Fairs over Bee and Honey Exhibits. We will send sample copies of the BEE JOURNAL to be used in connection with the Posters in securing subscribers. Write a week before the Fair, telling us where to send them. We would like to have a good agent at every Fair to be held this year. Here is a chance for a live man—or woman.

Doolittle's Queen-Rearing book should be in the library of every bee-keeper; and in the way we offer it on page 447, there is no reason now why every one may not possess a copy of it. Send us one new subscriber for a year, and we will mail the book to you as a present.

Read our great offer on page 445.

CONVENTION DIRECTORY.

Time and place of meeting.

1892.
Oct. 4.—Capital, at Springfield, Ills.
C. E. Yocom, Sec., Sherman, Ills.
Oct. 7.—Utah, at Salt Lake City, Utah.
John C. Swamer, Sec., Salt Lake City, Utah.
Oct. 18, 19.—Illinois State, at Chicago, Ills.
Jas. A. Stone, Sec., Bradfordton, Ills.
Oct. 19.—N. E. Ohio, N. Penn. & W. New York
at Sakerstown, Pa.
George Splitler, Sec., Moslertown, Pa.
Nov. 28.—Allegheny Co., at Angelica, N. Y.
H. L. Dwight, Sec., Friendship, N. Y.
1893.
Jan. 13, 14.—S. W. Wisconsin, at Boscobel, Wis.
Edwin Pike, Pres., Boscobel, Wis.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITORS.

North American Bee-Keepers' Association

PRESIDENT—Eugene Secor, Forest City, Iowa.
SECRETARY—W. Z. Hutchinson, Flint, Mich.

National Bee-Keepers' Union.

PRESIDENT—James Heddon, Dowagiac, Mich.
SECY AND MANAGER—T. G. Newman, Chicago.

SELECTIONS FROM OUR LETTER BOX

REPORTS, PROSPECTS, ETC.

Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Pretty Good Fall Honey-Flow.

There has been a pretty good fall honey-flow, as predicted by W. T. Falconer sometime ago. Bees have stored an average of 20 pounds of comb honey per colony in the last two weeks, besides filling up the brood-chambers. Most of it is gathered from Spanish-needle.

EDW. SMITH.

Carpenter, Ills., Sept. 19, 1892.

Report for the Season.

September 16th closes the honey season in this vicinity. July and August were exceedingly good months for bees. The 20 years that I have been in the bee-business I never saw basswood trees

so full of blossoms as the past season, and it yielded large quantities of honey. Golden-rod blossomed nicely, and the hot days we have had kept the bees in the sections. I shall have no unfinished sections to keep over. I have had a large lot of honey to sell at 20 cents a pound.

I keep part Italians and part black bees. I prefer the black bees to Italians for comb honey. I am honest about this. I love the beautiful Italians, and take pride in showing them to friends that call to see me; but when we come to section honey, I would rather have the black bees to work for me.

White clover was a total failure with us this season. May and June were two wet months, and bees had hard work to gather honey enough to live on and keep up brood-rearing. The new growth of white clover that has come up abundantly this season gives us encouragement to look for a big honey season next year.

C. A. MARSH.

Sharon, Vt., Sept. 16, 1892.

Hopes for a Better Season Next Year.

This season has been the poorest in 20 years for bee-keepers here in the East; but we live in hopes of a better one next year.

WM. W. CARY.

Colerain, Mass., Sept. 19, 1892.

Enough Honey for Wintering.

Again we have no honey crop. Fortunately, however, the bees will have enough to winter on.

E. J. BAXTER.

Nauvoo, Ills., Sept. 19, 1892.

Bees in Fine Condition—Honey-Plants

My bees have only made a living so far. From 9 colonies I have obtained only 67½ pounds of extracted honey, and 2 swarms. I have visited some few small apiaries of this (Cocke) and Hamblin counties, and find that there is no surplus honey here. My bees are in fine condition for winter, and I am expecting to get some honey yet from golden-rod and from a weed that blooms just before frost—we call it "white-top" or "frost-weed."

We have a fine place for bees, with plenty of timber to get honey from, viz: The poplar commences to bloom the first of May, and lasts about three weeks; then we have the clover that the bees work on, but they do not get much honey from it; then about June

10th the basswood blooms; then the sour-wood commences immediately after the basswood, and lasts until about the first of August. The chestnut blooms in June, from which we get honey sometimes. We also have the maple, the holly, and the black gum. In the fall we have the smart-weed, Spanish-needle, butter-weed, golden-rod, frost-weed, and plenty of other varieties which are too numerous to mention.

WM. WEBB.

Sutton, Tenn., Sept. 12, 1892.

Plenty of Stores for Winter, Etc.

This has not been a very prosperous season for the apiarist. I started with one colony, increased to 4, and took off 40 pounds of comb honey. I had one swarm on May 6th, one on the 12th, and a swarm from the first swarm on June 20th. All have plenty of stores to winter on.

I captured a swarm of Italian bees 3 years ago this summer, and clipped the queen's wing. They did not swarm last summer, and I took off 61 pounds of comb honey. This same queen swarmed on May 6th, and a second time on June 20th. The hive is very full of bees and brood, and not 20 drones in the hive. Now, I am sure this queen is 4 years old. Who can produce a queen to beat this one?

N. W. SHULTZ.

Shreve, O., Sept. 12, 1892.

Heart's-Ease and Buckwheat Honey.

I have 27 colonies of bees, and obtained, this year, 1,200 pounds of comb honey from heart's-ease and buckwheat.

JAS. W. TOWNLEY.

Octavia, Nebr., Sept. 16, 1892.



COMBED AND EXTRACTED.

Carbolic Acid for Uniting Bees, Etc.

Carbolic acid may be used to good advantage in uniting colonies, or in driving robbers away from a hive that is being robbed. The manner of using is in the form of a solution, one part of acid to seven of water, with one-half dram of glycerine added to each ounce of the mixture. The glycerine holds the acid

in suspension, and makes a clear solution. The mixture is applied with an ordinary atomizer, such as is used for spraying perfumery.

When wishing to unite two or more colonies, I spray the entrances of the hives, say 24 hours before uniting, and the travel of the bees to and from the hives during this time gives all the bees the same odor. I have for three seasons been practicing this mode of uniting, and have yet to see the first quarrel.

My former method of uniting was to place one body containing the bees over another with a sheet of wire screen between, leaving the bees in this shape say 24 hours, when they would all be scented alike, then removing the screen. This plan worked well, but the trouble was that when the weather was hot a great many bees would worry themselves to death; besides, it is more work than the spraying plan.

In cases of robbing I have broken them up almost instantaneously by use of the same application. I generally place some straw or grass over the entrances, and thoroughly spray the same; also the sides of the hive. This completely changes the odor, and has had the effect of baffling the robbers.—J. F. SHIRK, in *B.-K. R.*

Who'll Accept this Challenge?

Dr. Edward Everett Hale, who has lived in Boston all his life, says:

"I like to put myself on record also as saying that all the poverty, all the crime, and all the vice which attract public attention in Boston, among what we call 'the poorer classes,' may be ascribed to the free use of intoxicating liquors. I have said a hundred times, and I am willing to say it again, that if anybody will take charge of all the poverty and crime which result from drunkenness, the South Congregational Church, of which I have the honor to be the minister, will alone take charge of all the rest of the poverty which needs 'out-door relief' in the city of Boston."

The Change of Nectar to Honey.

The experiment of Schonfeld, in Germany, seems to prove that the ripening of honey, or the change from nectar to honey, is a process of evaporation only. Dzierzon, however, thinks that this condensing process is performed by the direct action of the bees. He says: "It seems we can reasonably suppose that

the honey-stomach of the bee is like a filter, allowing the water to pass through its walls. I believe nectar would much sooner turn sour than thicken to the consistency of honey inside of the hive." Schonfeld, in his experiment, formed a colony of young bees only, which he knew would not and did not go out in search of food. To this colony he introduced a comb filled with sugar syrup, but inclosed in wire cloth. Then he fed this colony the same kind of thin syrup. At the end of seven days the fed and stored syrup was compared with the screen-inclosed syrup, and only an insignificant difference was ascertained in favor of the first named. The syrup in the inclosed comb had not soured, and was so nearly of the same consistency that Von Planta, who made the analysis, thinks it questionable whether, in this process of concentration, the organization of the bee plays any part at all.—F. GREINER, in *Gleanings*.

Study of Honey-Producing Flowers.

There is no subject of more importance to the bee-keeper, nor is there one that gives him more pleasure, than the study of honey-producing flowers. No matter whether they bloom in the garden, the field or forest, or perchance along the roadsides, if bees gather honey from them, they at once become an object of much interest and special investigation. The question of bee-forage is one that every one engaged in bee-keeping should investigate, for upon the amount and duration of honey-producing plants in the vicinity of the apiary depends the success or failure of the enterprise.

In locating an apiary for honey production, one should have an eye to the amount of bee-forage in reach of the location, for no amount of labor and skill in manipulation of our bees will pay where it is wanting. If situated in a poor location, and we wish to take up bee-keeping, we can help much by sowing buckwheat and Alsike clover, and interesting our neighbors in this direction also.—G. M. DOOLITTLE, in *National Stockman*.

Why Not send us one new name, with \$1.00, and get Doolittle's book on "Scientific Queen-Rearing" as a premium? Read the offer on page 447.

Don't Fail to read all of page 421.



PUBLISHED WEEKLY BY

GEORGE W. YORK & CO.,

At One Dollar a Year,

199 RANDOLPH ST., CHICAGO, ILLS.

TO CORRESPONDENTS.

The Bee Journal is sent to subscribers until an order is received by the publishers for its discontinuance, and all arrearages are paid.

A Sample Copy of the **BEE JOURNAL** will be sent **FREE** upon application.

How to Send Money.—Remit by Express, Post-Office Money Order, or Bank Draft on New York or Chicago. If none of these can be had, Register your Letter, aming Stamps both for postage and registry, and take a receipt for it. Money sent thus, is **AT OUR RISK**; otherwise it is not. Do not send Checks on Local Banks—we have to pay 25 cents each, to get them cashed.

Never Send Silver in letters. It will wear holes in the envelope, or may be stolen.

Make all Money Orders Payable at Chicago, Ill.—not at any sub-station of Chicago.

Postage Stamps of any denomination may be sent for any fraction of a dollar; or where Money Orders cannot be obtained, stamps for any amount may be sent.

Subscription Credits.—The receipt for money sent us will be given on the address-label of every paper. The subscription is paid to the **END OF THE MONTH** indicated.

Do not Write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Emerson Binders, made especially for the **AMERICAN BEE JOURNAL**, are convenient for preserving each weekly Number, as fast as received. They will be sent, post-paid, for 50 cts. each. They cannot be sent by mail to Canada.

Lost Numbers.—We carefully mail the **BEE JOURNAL** to every subscriber, but should any be lost in the mails, we will replace them if notified before all the edition is exhausted.

Always State the Post-Office to which your paper is addressed, when writing to us.

Special Notices.

The Date on the wrapper-label of this paper indicates the end of the month to which you have paid for the **JOURNAL**. If that is past, please send us one dollar to pay for another year. This shows that Mr. Porter has paid his subscription to the end of next December:

Wallace Porter Dec92
Suffield, Portage co, Ohio

The Convention Hand-Book is very convenient at Bee-Conventions. It contains a Manual of Parliamentary Law and Rules of Order for Local Conventions; Constitution and By-Laws for a Local Society; Programme for a Convention, with subjects for discussion, and about 50 blank pages, to make notes upon. It is bound in cloth, and of the right size for the pocket. We will present a copy for one new subscriber to the **BEE JOURNAL**, with \$1.00.

An Apiary Register is a splendid book to have in an apiary, so as to know all about any colony of bees at a moment's notice. It devotes two pages to each colony. We will send one large enough for 50 colonies, for \$1.00, post-paid; for 100 colonies, for \$1.25; or for 200 colonies, for \$1.50. After using it for one season, you would not do without it.

The Premiums which we give for securing new subscribers to the **AMERICAN BEE JOURNAL**, are intended as pay for *work done* in getting new names among your friends and acquaintances, and are not offered to those who send in *their own* names as new subscribers, unless such name or names form a part of a club of at least three subscribers.

A Binder for preserving the copies of the **AMERICAN BEE JOURNAL** as it arrives from week to week, is very convenient. You should have one, as it is so handy for reference from time to time. We mail it for only 50 cents, or will give it as a premium for two new subscribers, with \$2.00.

When Talking About Bees to your friend or neighbor, you will oblige us by commending the **BEE JOURNAL** to him, and taking his subscription to send with your renewal. For this work we offer some excellent premiums that you ought to take advantage of.

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the *American Bee Journal* must be sent with each order for another paper or book:

	Price of both.	Club.
The <i>American Bee Journal</i>	\$1 00....	
and Gleanings in Bee-Culture.....	2 00....	1 75
Bee-Keepers' Review.....	2 00....	1 75
The Apiculturist.....	1 75....	1 65
Bee-Keepers' Guide.....	1 50....	1 40
American Bee-Keeper.....	1 50....	1 40
Canadian Bee Journal.....	2 00....	1 75
Nebraska Bee-Keeper.....	1 50....	1 35
The 8 above-named papers.....	6 25....	5 25
and Langstroth Revised (Dadant).....	2 40....	2 25
Cook's Manual.....	2 00....	1 75
Doolittle on Queen-Rearing.....	2 00....	1 65
Bees and Honey (Newman).....	2 00....	1 75
Advanced Bee-Culture.....	1 50....	1 40
Dzierzon's Bee-Book (cloth).....	2 25....	2 00
Root's A B C of Bee-Culture.....	2 25....	2 10
A Year Among the Bees.....	1 50....	1 35
Convention Hand-Book.....	1 25....	1 15
History of National Society.....	1 50....	1 25
Weekly Inter-Ocean.....	2 00....	1 75
The Lever (Temperance).....	2 00....	1 75
Orange Judd Farmer.....	2 00....	1 75
Farm, Field and Stockman.....	2 00....	1 75
Prairie Farmer.....	2 00....	1 75
Illustrated Home Journal.....	1 50....	1 35
American Garden.....	2 50....	2 00
Rural New Yorker.....	3 00....	2 25

Do not send to us for sample copies of any other papers. Send for such to the publishers of the papers you want.

Almost Every Bee-Book that is now published we mention on the second page of this issue of the *BEE JOURNAL*. Look over the list and select what you want. For every new yearly subscriber that you secure for us at \$1.00, we will allow you 25 cents, to apply on the purchase of any book we have for sale. This is a rare chance to get some valuable apicultural reading-matter, and at the same time aid in spreading helpful apiarian knowledge among your friends.

Bee-Keeping for Profit, by Dr. G. L. Tinker, is a nice, 50-page pamphlet, which details fully the author's new system of bee-management in producing comb and extracted honey, and the construction of the hive best adapted to it—his "Nonpareil." The book can be had at this office for 25 cents, or will be given for one new subscriber, with \$1.

One - Cent Postage Stamps

are preferred by us when it is necessary for any of our subscribers to send stamps in place of paper money, Express or Post-office Money Orders, or drafts on New York or Chicago. The Express Money Orders, or Post-office Money Orders, are the safest outside of drafts. Do not send checks on your local banks as it costs us 25 cents each to get them cashed here. Postal Notes are no safer than cash put into the envelope, so do not waste your money in buying them, but get a Money Order instead.

This Means You.—When ordering any of the books or articles which we offer clubbed with the *BEE JOURNAL*, or otherwise; or when sending anything intended for us, such as subscriptions to the *BEE JOURNAL*, or matter for publication, be sure to address everything to—**George W. York & Co., 199 Randolph St., Chicago, Ills.**

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the *BEE JOURNAL*. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

Webster's Pocket Dictionary we offer as a premium for sending *only one new* subscriber with \$1.00. It is a splendid Dictionary—and just right for a pocket.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line**, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

WANTED—To sell, good Apiary and Fixtures at Pattonburg, Mo. Good location. Address, **G. F. TUCKER, 144t Yellville, Ark.**

TO EXCHANGE—Pure Tested Young Italians, 3 to 5 bands, 50 cents to \$1.00—for cash, wax or offers. **F. C. MORROW, 644t Wallaceburg, Arkansas.**